(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



1940) (1840) (1960) (1960) (1860) (1860) (1860) (1860) (1860) (1860) (1860) (1860) (1860) (1860) (1860) (1860)

(43) International Publication Date 15 January 2004 (15.01.2004)

PCT

(10) International Publication Number WO 2004/004847 A1

(81) Designated States (national): AT, AU, BR, CA, CH, CN,

(84) Designated States (regional): Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE,

IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

PL, PT, RU, SE, SG, SK, US, YU, ZA.

CZ, DE, DK, ES, FI, GB, HU, IL, JP, KR, MX, NO, NZ,

BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,

(51) International Patent Classification7:

.

A63C 17/14

(21) International Application Number:

PCT/CA2003/001030

(22) International Filing Date:

8 July 2003 (08.07.2003)

(25) Filing Language:

English

(26) Publication Language:

(20) I upheation Languag

English

(30) Priority Data: 60/394,284

9 July 2002 (09.07.2002) US

Published:

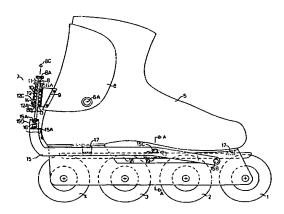
- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(71) Applicant and

(72) Inventor: LANSEL, Toby [CA/CA]; 4152 East Pender Street, Burnaby, British Columbia V5C 2M2 (CA).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FOUR WHEEL MECHANICAL BRAKE SYSTEM FOR INLINE SKATES



(57) Abstract: A mechanical brake system for inline skates that utilizes all four wheels for braking. The brake is applied by the skater straightening the leg, or both legs if there are brakes on both skates, to a predetermined adjustable position. This causes the adjustable and spring loaded trigger rod, mounted on the pivoting ankle support behind the heel to push the brake lever that extends from behind the heel on both sides of the frame to the front where it is hingedly attached to move downwards. At the mid-point of the skate the brake rail positioned above the wheels and extending the whole length of the skate is connected to the brake lever. The downward movement of the brake lever and brake rail causes the brake rail to contact the wheels causing friction and thereby braking in direct proportion to the force by which the skater is straightening the leg(s). The brake rail is inflexible and shaped to fit the curvature of the wheels thereby facilitating even wheel wear both regarding shape and diameter. Two brackets mounted on the underside of the skate and passing through slots in the brake rail ensure centering of the brake rail. The spring loading of the trigger rod ensures smooth and controllable braking. The spring tension of the spring loaded trigger rod is adjustable so that skaters with different body weight can have optimum braking power without wheel lock-up.

INTERNATIONAL SEARCH REPORT

Internati plication No PCT/CA 03/01030

A. CLASSIFI IPC 7	CATION OF SUBJECT MATTER A63C17/14								
A coording to	International Patent Classification (IPC) or to both national classificatio	n and IPC							
B. FIELDS S									
Minimum doc	cumentation searched (dassification system followed by dassification	symbols)							
IPC 7	A63C								
Documentation	on searched other than minimum documentation to the extent that such	documents are included in the fields sea	arched						
Electronic da	ata base consulted during the international search (name of data base	and, where practical, search terms used)							
EPO-Int	ternal								
C. DOCUME	ENTS CONSIDERED TO BE RELEVANT								
Category °	Citation of document, with indication, where appropriate, of the relev	ant passages	Relevant to daim No.						
Α	DE 197 30 115 A (NARDONE)		1-5						
[``	22 July 1999 (1999-07-22)								
	figures 2,3		1						
۸ ا	US 2001/054803 A1 (HALDEMANN)		1-5						
A	27 December 2001 (2001-12-27)								
	page 1								
1 .									
1									
1									
1									
1									
1			<u> </u>						
Further documents are listed in the continuation of box C. Patent family members are listed in annex.									
° Special c	ategories of cited documents:	"T" later document published after the int or priority date and not in conflict with							
A docum	nent defining the general state of the art which is not idered to be of particular relevance	cited to understand the principle or the invention	heory underlying the						
'E' earlier	r document but published on or after the international	"X" document of particular relevance; the							
filing	date	involve an inventive step when the o	ocument is taken along						
which citati	h is cited to establish the publication date of another on or other special reason (as specified)	"Y" document of particular relevance; the cannot be considered to involve an i							
"O" docur	ment referring to an oral disclosure, use, exhibition or r means	document is combined with one of the ments, such combination being obvi							
P docum	ment published prior to the international filing date but	in the art. *&" document member of the same pater	nt family						
	than the priority date claimed e actual completion of the international search	Date of mailing of the international s							
	27 October 2003	04/11/2003							
		Authorized officer							
Name and	d mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2								
	NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,	Steegman, R							
1	Fax: (+31-70) 340-3016	1	_						

INTERNATIONAL SEARCH REPORT

information on patent family members

Interna	pplication No		
PCT/CA	03/01030		

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
DE 19730115	A	22-07-1999	DE	19730115 A1	22-07-1999
US 2001054803	A1	27-12-2001	CA WO EP	2364656 A1 0050132 A1 1156859 A1	31-08-2000 31-08-2000 28-11-2001

Form PCT/ISA/210 (patent family annex) (July 1992)